

WHAT IS CLAIMED IS:

1. (Original) A method for emergency evacuation of building occupants from a multi-story building having a plurality of floors, a stairway and at least one elevator with an elevator car positionable at selected landings of the floors, the method comprising the steps of:

determining a number of building occupants in the building;
detecting an emergency condition in the building;
defining at least one evacuation zone in the building during the emergency condition;
defining at least one designated floor in the building during the emergency condition; and
evacuating the building occupants from the evacuation zone to the designated floor via at least one of the elevator car and the stairway.

2. (Original) The method of claim 1, wherein the step of evacuating the building occupants from the evacuation zone to the designated floor via at least one of the elevator and the stairway includes at least one of: full evacuation, zone evacuation, jump evacuation, and selective evacuation.

3. (Original) The method of claim 2, wherein:

full evacuation includes evacuating all building occupants from the building;

zone evacuation includes evacuating only building occupants present within the evacuation zone;

jump evacuation includes excluding at least one danger zone of the evacuation zone from evacuation; and

selective evacuation includes evacuating certain occupants at least one of with priority and to a designated floor having a handicapped exit of the building.

4. (Original) The method of claim 3, wherein the certain occupants include at least one of disabled people, children, VIP persons, and persons having special identification.

5. (Original) The method of claim 1, wherein the step of determining the number of building occupants includes at least one of measuring car load and counting a number of destination calls or identification codes requiring floor access.

6. (Original) The method of claim 1, wherein the step of evacuating the building occupants from the evacuation zone to the designated floor takes place by at least two elevators, wherein elevator cars of said elevators are positioned at a common floor in the evacuation zone with their doors opened.

7. (Original) The method of claim 6, including at least one of:
evacuating each floor in the evacuation zone to be evacuated by elevators by a number of elevator cars having a total load capacity corresponding to the load of the number of building occupants present in said floor,
sequentially evacuating the floors in the evacuation zone to be evacuated by elevators, and
evacuating each floor in the evacuation zone to be evacuated by elevators only once.

8. (Original) The method of claim 1, further including at least one of directing and guiding building occupants by the stairway to a floor in the evacuation zone to be evacuated by elevators, and directing and guiding building occupants by the stairway or at least one escalator from the designated floor to a building exit.

9. (Original) The method of claim 7, including directing and guiding building occupants to the elevator and/or stairway with at least one of audio and visual indicating devices.

10. (Original) A method for emergency evacuation of occupants from a multi-story building having a plurality of floors, a stairway, and at least two elevators, each with an elevator car being positionable at selected landings of the floors, the method comprising the steps of:

detecting an emergency condition in the building;

defining at least one evacuation zone in the building during the emergency condition;

defining at least one designated floor in the building during the emergency condition; and

evacuating the building occupants from the evacuation zone to the designated floor with at least two elevator cars being positioned at a common floor in the evacuation zone with their doors opened.

11. (Original) The method of claim 10, including at least one of:

evacuating each floor in the evacuation zone to be evacuated by elevators by a number of elevator cars having a total load capacity corresponding to an estimated load of the number of building occupants present in said floor,

evacuating the floors in the evacuation zone to be evacuated by elevators sequentially, starting with a region in an emergency zone of high danger for building occupants, and

evacuating each floor in the evacuation zone to be evacuated by elevators only once.

12. (Original) The method of claim 10, further including directing and guiding building occupants at least one of:

by the stairway to a floor in the evacuation zone to be evacuated by elevators, and

by the stairway or at least one escalator from the designated floor to a building exit.

13. (Original) The method of claim 12, including directing and guiding building occupants to the elevator and/or stairway with at least one of audio visual indicating devices.

14. (Original) A system for emergency evacuation of occupants from a multi-story building having a plurality of floors, a stairway and at least one elevator with an elevator car positionable at selected landings of the floors, comprising:

first means for measuring a number of persons;

second means for detecting an emergency condition in the building; and

a control unit for determining a number of building occupants in the building, the control unit being operative to define at least one evacuation zone in the building during the emergency condition, the control unit being further operative to define at least one designated floor in the building during the emergency

condition, whereby the building occupants are evacuated from the evacuation zone to the designated floor by at least one of the elevator car and the stairway.

15. (Original) The system of claim 14, wherein the first means includes at least one of an elevator car load detector, a digit keypad and an identification media reader.

16. (Original) The system of claim 14, and further comprising at least one of audio and visual indicating means for directing and guiding people to the elevator or to the stairway.

17. (Original) The system of claim 14, wherein an emergency condition alarm indicating an emergency condition in the building is generated at least one of automatically by the second means, manually using the first means and remotely.

18. (Original) The system of claim 17, wherein each emergency condition is identified by a code number.

19. (Original) A method for modernizing an existing elevator in a multi-story building with a system for emergency evacuation of building occupants, the building having a plurality of floors, a stairway and at least one elevator with an elevator car positionable at selected landings of the floors, the method comprising the steps of:

installing at least one of first means for measuring a number of persons, and a control unit for determining a number of building occupants in the building; and

installing second means for detecting an emergency condition in the building, the control unit being operative to define at least one evacuation zone in

the building during the emergency condition, the control unit being further operative to define at least one designated floor in the building during the emergency condition, whereby the building occupants are evacuated during the emergency condition with at least one of the elevator car and the stairway from the evacuation zone to the designated floor.